

TYPE-R SUBWOOFER
HAUT-PARLEUR D'EXTRÊMES GRAVES TYPE-R
APPLICATION GUIDE
GUIDE D' APPLICATION

SWR-1243D

12 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (4Ω)+(4Ω)

SWR-1223D

12 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (2Ω)+(2Ω)

SWR-1043D

10 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (4Ω)+(4Ω)

SWR-1023D

10 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (2Ω)+(2Ω)

SWR-843D

8 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 8 po (4Ω)+(4Ω)

SWR-823D

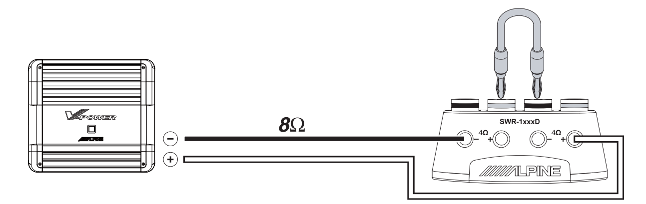
8 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 8 po (2Ω)+(2Ω)



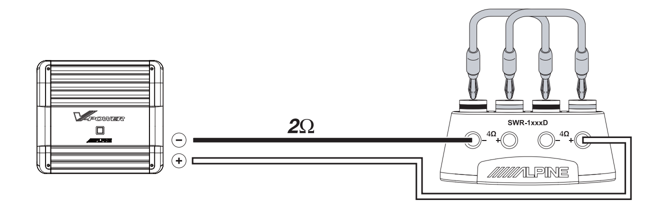
DUAL 4 Ω TYPE-R APPLICATION DIAGRAMS
SCHÉMAS D'APPLICATION - TYPE-R, DOUBLE BOBINE, 4 Ω

SWR-843D / SWR-1043D / SWR-1243D

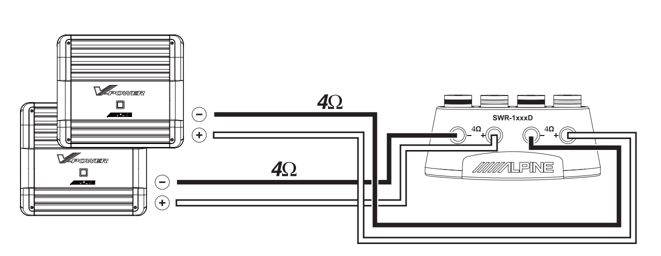
Example 1 One Amplifier and One Subwoofer
Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves



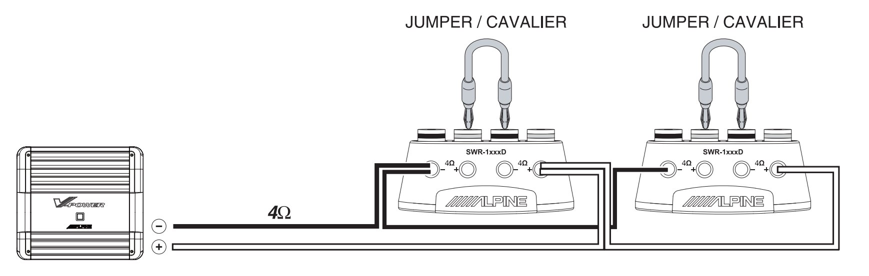
Example 2 One Amplifier and One Subwoofer
Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves



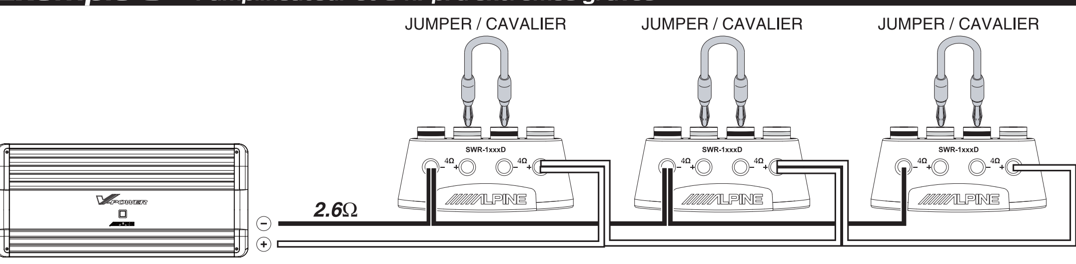
Example 3 Two Amplifiers and One Subwoofer
Exemple 3 2 amplificateurs et 1 h.-p. d'extrêmes graves



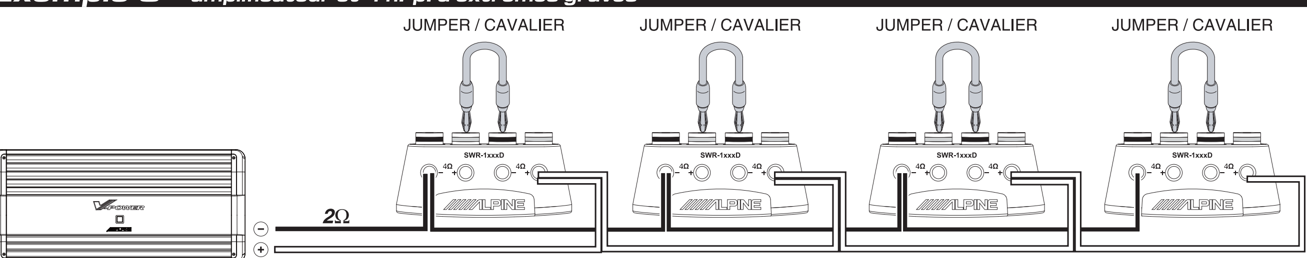
Example 4 One Amplifier and Two Subwoofers
Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves

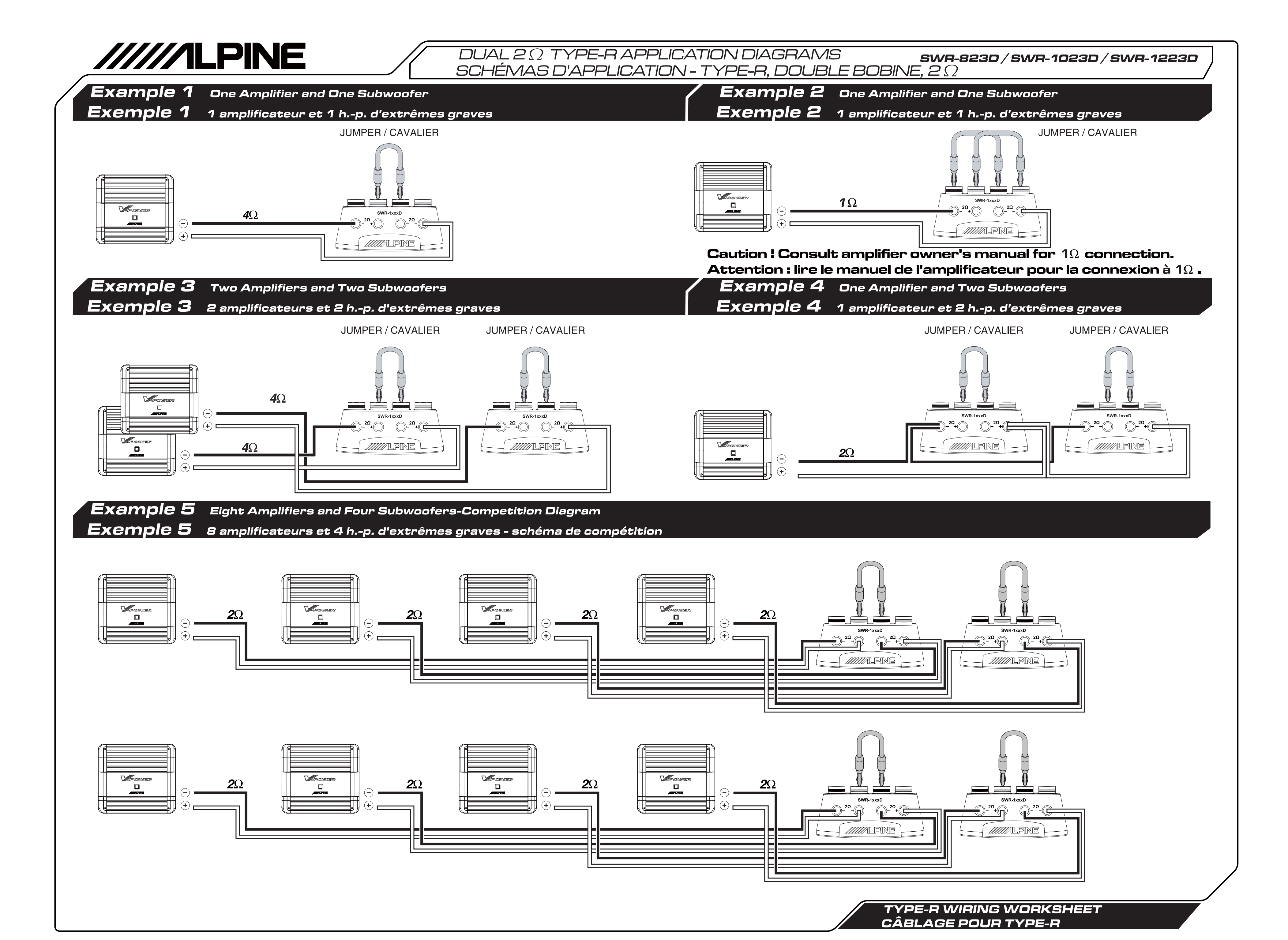


Example 5 One Amplifier and Three Subwoofers
Exemple 5 1 amplificateur et 3 h.-p. d'extrêmes graves



Example 6 One Amplifier and Four Subwoofers
Exemple 6 amplificateur et 4 h.-p. d'extrêmes graves




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DUAL 2Ω TYPE-R APPLICATION DIAGRAMS
SCHÉMAS D'APPLICATION - TYPE-R, DOUBLE BOBINE, 2Ω
SWR-823D / SWR-1023D / SWR-1223D
Example 1 One Amplifier and One Subwoofer
Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves
JUMPER / CAVALIER
4Ω
SWR-1xxxD
2Ω
Example 2 One Amplifier and One Subwoofer
Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves
JUMPER / CAVALIER
1Ω
Caution ! Consult amplifier owner's manual for 1Ω connection.
Attention : lire le manuel de l'amplificateur pour la connexion à 1Ω .
Example 3 Two Amplifiers and Two Subwoofers
Exemple 3 2 amplificateurs et 2 h.-p. d'extrêmes graves
JUMPER / CAVALIER
JUMPER / CAVALIER
4Ω
4Ω
Example 4 One Amplifier and Two Subwoofers
Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves
JUMPER / CAVALIER
JUMPER / CAVALIER
2Ω
Example 5 Eight Amplifiers and Four Subwoofers-Competition Diagram
Exemple 5 8 amplificateurs et 4 h.-p. d'extrêmes graves - schéma de compétition
2Ω
2Ω
2Ω
2Ω
2Ω
2Ω
2Ω
2Ω
TYPE-R WIRING WORKSHEET
CÂBLAGE POUR TYPE-R

Subwoofer Features and Specifications		Type-R					
		SWR-823D	SWR-843D	SWR-1023D	SWR-1043D	SWR-1223D	SWR-1243D
Features							
Size		8"	8"	10"	10"	12"	12"
Power Handling (RMS/peak)		350W/1000W	350W/1000W	600W/1800W	600W/1800W	600W/1800W	600W/1800W
Power Range (RMS)		150W-350W	150W-350W	300W-600W	300W-600W	300W-600W	300W-600W
Frequency Response (Hz)		28Hz-200Hz	28Hz-200Hz	26Hz-200Hz	26Hz-200Hz	24Hz-200Hz	24Hz-200Hz
Diaphragm	Material	Kevlar-Reinforced Pulp Fiber					
	Design	2-Piece Structural Parabolic					
Surround	Material	Injection Molded Santoprene®					
	Design	High Amplitude Multi-Roll **(Patent Pending)**					
Spider	Material	Nomex®					
	Design	Progressive					
Voice Coil	Material	180°C High Temp Wire on Spiral Cut Aluminum Former					
	Design	4-Layer Dual Voice Coil					
Motor Structure	Pole Geometry	Compound Radius Curve **(US Patent #6,639,993)**					
	Configuration	Integrated Shorting Sleeve with Radial Vented VC Heat Transfer **(US Patents #7,634,101; #7,272,238; other Patents Pending)**					
Magnet	Material	High-Power Strontium Ferrite					
	Configuration	6-Piece (8") / 10-Piece (10"/12") Radially Segmented, Double Stacked					
Frame	Material	Cast Aluminum					
	Design	Single-Piece Casting with Airflow Management System **(US Patent #6,678,837; #7,684,585; other Patents Pending)**					
Terminals	Layout	One Sided					
	Design	Heavy Duty 8ga. Push with Housing, Banana Sockets for VC Configuration Jumpers					
Tinsel Leads	Design	Reinforced Layer Spider Integration **(US Patent #6,810,988)**					
Gasket	Design	Concealed Mount Gasket System and Integrated Grill Ready **(US Patent #7,760,900)**					
Enclosure Information							
Mounting Depth		115 mm (4.525")	115 mm (4.525")	149 mm (5.875")	149 mm (5.875")	162 mm (6.375")	162 mm (6.375")
Mounting Diameter - Front Mount		176 mm (6.93")	176 mm (6.93")	231 mm (9.1")	231 mm (9.1")	275 mm (10.9")	275 mm (10.9")
Displacement - Front Mount**		0.050 ft^3	0.050 ft^3	0.080 ft^3	0.080 ft^3	0.100 ft^3	0.100 ft^3
Added Volume - Reverse Mount (magnet out)**		0.035 ft^3	0.035 ft^3	0.055 ft^3	0.055 ft^3	0.090 ft^3	0.090 ft^3
Recommended Enclosure Alignments		Sealed, Vented, Bandpass, Infinite Baffle		Sealed, Vented, Bandpass			
Sealed Box Volume Range (Gross)		0.15-0.50 ft^3	0.15-0.50 ft^3	0.5-1.0 ft^3	0.5-1.0 ft^3	0.65-1.25 ft^3	0.65-1.25 ft^3
Optimum Sealed Box	External Box Dimensions	13" x 13" x 5.5"	13" x 13" x 5.5"	12.5" x 12.5" x 10"	12.5" x 12.5" x 10"	14.5" x 14.5" x 10.5"	14.5" x 14.5" x 10.5"
	Gross Internal Volume	0.30 ft^3	0.30 ft^3	0.60 ft^3	0.60 ft^3	0.90 ft^3	0.90 ft^3
	Net Internal Volume**	0.25 ft^3	0.25 ft^3	0.50 ft^3	0.50 ft^3	0.75 ft^3	0.75 ft^3
	F_3, Q_{tc}	53 Hz, 0.80	53 Hz, 0.80	43 Hz, 0.90	46 Hz, 0.90	44 Hz, 0.90	43 Hz, 0.90
Vented Box Volume Range (Gross)		0.25-0.60 ft^3	0.25-0.60 ft^3	0.8-1.5 ft^3	0.8-1.5 ft^3	1.0-2.0 ft^3	1.0-2.0 ft^3
Optimum Vented Box	External Box Dimensions	11" x 8.5" x 20"	11" x 8.5" x 20"	12.5" x 12.5" x 20.5"	12.5" x 12.5" x 20.5"	13.5" x 13.5" x 24"	13.5" x 13.5" x 24"
	Gross Internal Volume	0.70 ft^3	0.70 ft^3	1.4 ft^3	1.4 ft^3	1.9 ft^3	1.9 ft^3
	Vent Area (dimensions)	5.25 in^2 (7" x 0.75")	5.25 in^2 (7" x 0.75")	11 in^2 (11" x 1")	11 in^2 (11" x 1")	15 in^2 (12" x 1.25")	15 in^2 (12" x 1.25")
	Vent Length	15.5"	15.5"	18.5"	18.5"	22"	22"
	Vent Displacement	0.10 ft^3	0.10 ft^3	0.24 ft^3	0.24 ft^3	0.29 ft^3	0.29 ft^3
	Net Internal Volume (V_b)***	0.55 ft^3	0.55 ft^3	1.1 ft^3	1.1 ft^3	1.5 ft^3	1.5 ft^3
	F_3, ripple, F_b	31Hz, 2dB, 36Hz	31Hz, 2dB, 36Hz	26Hz, 4.2dB, 35Hz	28Hz, 4.5dB, 35Hz	27Hz, 4.2dB, 33Hz	27Hz, 3.9dB, 33Hz
Electro-Mechanical Parameters #							
Nominal Impedance		2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
Frequency Response		28 - 200Hz	28 - 200Hz	26 - 200Hz	26 - 200Hz	24 - 200Hz	24 - 200Hz
Sensitivity (SPL@1W/1m)*		83.5dB	83.5dB	83dB	83dB	85dB	85dB
D.C Coil Resistance (Re)		1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω
Inductance (Le) 1kHz/20kHz		0.87mH/0.30mH	1.23mH/0.35mH	2.39mH/1.02mH	3.79mH/1.93mH	2.41mH/1.02mH	3.85mH/1.92mH
Free Air Resonance (Fs)		38Hz	40Hz	29Hz	31Hz	28Hz	31Hz
Equivalent Stiffness (Vas)		12L (0.42 ft^3)	12L (0.42 ft^3)	26L (0.92 ft^3)	21L (0.75 ft^3)	43L (1.5 ft^3)	38L (1.5 ft^3)
Mechanical Q (Qms)		7.8	7.5	8.7	7.9	8.5	7.9
Electrical Q (Qes)		0.55	0.60	0.53	0.57	0.50	0.57
Total Q (Qts)		0.50	0.55	0.50	0.53	0.47	0.53
$Xmax_{10}$ (One-Way Xmax @ 10% Distortion)		14 mm	14 mm	20 mm	20 mm	20 mm	20 mm
Mechanical Excursion, Peak-to-Peak		52 mm	52 mm	70mm	70mm	72mm	72mm
Gap Height (Hag)		10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
Coil Height (Hvc)		29 mm	29 mm	44mm	44mm	44mm	44mm
Cone Area (Sd)		201 cm^2	201 cm^2	332 cm^2	332 cm^2	480 cm^2	480 cm^2
Voice Coil Diameter		40 mm (1.6")	40 mm (1.6")	65 mm (2.6")	65 mm (2.6")	65 mm (2.6")	65 mm (2.6")
Magnet Weight		52 oz	52 oz	128 oz	128 oz	144 oz	144 oz

Note: All specifications are subject to change without notice

All T/S parameters measured/calculated with voice coils connected in series, after break-in.

* This commonly misunderstood specification should not be used as a reference for subwoofer output capability.

** Based upon 3/4" (19mm) baffle thickness, with opening cut approximately to gasket inner diameter

Caractéristiques et spécifications Caractéristiques		Type-R					
		SWR-823D	SWR-843D	SWR-1023D	SWR-1043D	SWR-1223D	SWR-1243D
Features							
Taille		8 po	8 po	10 po	10 po	12 po	12 po
Puissance admissible (efficace/de crête)		350W/1000W	350W/1000W	600W/1800W	600W/1800W	600W/1800W	600W/1800W
Plage de puissance (efficace)		150W-350W	150W-350W	300W-600W	300W-600W	300W-600W	300W-600W
Réponse en fréquence (Hz)		28Hz-200Hz	28Hz-200Hz	26Hz-200Hz	26Hz-200Hz	24Hz-200Hz	24Hz-200Hz
Membrane	Matériau	Pâte renforcée de Kevlar					
	Conception	2 pièce parabolique					
Suspension	Matériau	Santoprene[MD] moulé par injection					
	Conception	Multibourrelets à amplitude élevéé **(brevet en instance)**					
Centreur	Matériau	Nomex[MD]					
	Conception	Progressif					
Bobine	Matériau	Fil résistant jusqu'à 180°C, sur forme de aluminium à sillon hélicoïdal					
	Conception	4 couches, double bobine					
Moteur	Géométrie de pièce polaire	Moteur à courbe complexe **(brevet n° 6,639,993)**					
	Configuration	Manchon de court-circuit integre avec transfer de chaluer VC a ventlation radiale **(brevet n° 7,634,101; 7,272,238)**					
Aimant	Matériau	Haut-Parleur, Strontium Ferrite					
	Conception	Assemblage d'aimant segmenté, 10 pièce					
Bâti	Matériau	Aluminium moulé					
	Conception	Bâti externe à ventilation périmétrique **(brevet n° 6,678,837; 7,684,585)**					
Bornes	Répartition	Un côté					
	Conception	Solide, calibre 8, à presion avec boi̇tier, cavalier à fiche banane					
Fils conducteurs	Conception	Intégration au centreur à renforcée **(brevet n° 6,810,988)**					
Joint d'étanchéité	Conception	Système d'etanchéité à montage dissimulé et pret à recevior une grille intégrée (brevet n° 7,760,900)					
Enceinte							
Profondeur de montage		115 mm (4.525po)	115 mm (4.525po)	149 mm (5.875po)	149 mm (5.875po)	162 mm (6.375po)	162 mm (6.375po)
Diamètre de montage - montage avant		176 mm (6.93po)	176 mm (6.93po)	231 mm (9.1po)	231 mm (9.1po)	275 mm (10.9po)	275 mm (10.9po)
Déplacement - montage avant**		0.050 pi^3	0.050 pi^3	0.080 pi^3	0.080 pi^3	0.100 pi^3	0.100 pi^3
Volume ajouté - montage inversé**		0.035 pi^3	0.035 pi^3	0.055 pi^3	0.055 pi^3	0.090 pi^3	0.090 pi^3
Types d'enceintes recommandés		Sealed, Vented, Bandpass, Infinite Baffle		Sealed, Vented, Bandpass			
Volume d'enceinte close (brut)		0.15-0.50 pi^3	0.15-0.50 pi^3	0.5-1.0 pi^3	0.5-1.0 pi^3	0.65-1.25 pi^3	0.65-1.25 pi^3
Enceinte close optimale	Dimensions extérieures	13po x 13po x 5.5po	13po x 13po x 5.5po	12.5po x 12.5po x 10po	12.5po x 12.5po x 10po	14.5po x 14.5po x 10.5po	14.5po x 14.5po x 10.5po
	Volume intérieur brut	0.30 pi^3	0.30 pi^3	0.60 pi^3	0.60 pi^3	0.90 pi^3	0.90 pi^3
	Volume intérieur net***	0.25 pi^3	0.25 pi^3	0.50 pi^3	0.50 pi^3	0.75 pi^3	0.75 pi^3
	F_3, Q_{tc}	53 Hz, 0.80	53 Hz, 0.80	43 Hz, 0.90	46 Hz, 0.90	44 Hz, 0.90	43 Hz, 0.90
Volume d'enceinte à évent (brut)		0.25-0.6 pi^3	0.25-0.6 pi^3	0.8-1.5 pi^3	0.8-1.5 pi^3	1.0-2.0 pi^3	1.0-2.0 pi^3
Enceinte à évent optimale	Dimensions extérieures	11po x 8.5po x 20po	11po x 8.5po x 20po	12.5po x 12.5po x 20.5po	12.5po x 12.5po x 20.5po	13.5po x 13.5po x 24po	13.5po x 13.5po x 24po
	Volume intérieur brut	0.70 pi^3	0.70 pi^3	1.4 pi^3	1.4 pi^3	1.9 pi^3	1.9 pi^3
	Aire de l'évent (dimensions)	5.25 po^2 (7po x 0.75po)	5.25 po^2 (7po x 0.75po)	11 po^2 (11po x 1po)	11 po^2 (11po x 1po)	15 po^2 (12po x 1.25po)	15 po^2 (12po x 1.25po)
	Longueur de l'évent	15.5po	15.5po	18.5po	18.5po	22po	22po
	Déplacement de l'évent	0.10 pi^3	0.10 pi^3	0.24 pi^3	0.24 pi^3	0.29 pi^3	0.29 pi^3
	Volume intérieur net (V_b)***	0.55 pi^3	0.55 pi^3	1.1 pi^3	1.1 pi^3	1.5 pi^3	1.5 pi^3
	F_3, crête, F_b	31Hz, 2dB, 36Hz	31Hz, 2dB, 36Hz	26Hz, 4.2dB, 35Hz	28Hz, 4.5dB, 35Hz	27Hz, 4.2dB, 33Hz	27Hz, 3.9dB, 33Hz
Paramètres électromécaniques#							
Impédance nominale		2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
Réponse en fréquence		28 - 200Hz	28 - 200Hz	26 - 200Hz	26 - 200Hz	24 - 200Hz	24 - 200Hz
Sensibilité (NPA @ 1 W / 1 m)*		83.5dB	83.5dB	83dB	83dB	85dB	85dB
Résistance CC de la bobine (Re)		1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω
Inductance (Le) 1 kHz / 20 kHz		0.87mH/0.30mH	1.23mH/0.35mH	2.39mH/1.02mH	3.79mH/1.93mH	2.41mH/1.92mH	3.85mH/1.92mH
Résonance à l'air libre (Fs)		38Hz	40Hz	29Hz	31Hz	28Hz	31Hz
Raideur équivalente (Vas)		12L (0.42 pi^3)	12L (0.42 pi^3)	26L (0.92 pi^3)	21L (0.75 pi^3)	43L (1.5 pi^3)	38L (1.5 pi^3)
Q mécanique (Qms)		7.8	7.5	8.7	7.9	8.5	7.9
Q électrique (Qes)		0.55	0.60	0.53	0.57	0.50	0.57
Q total (Qts)		0.50	0.55	0.50	0.53	0.48	0.53
$Xmax_{10}$ (à sens unique Xmax @ 10% Distorsion)		14 mm	14 mm	20mm	20mm	20 mm	20 mm
Déplacement mécanique, crête à crête		52 mm	52 mm	70mm	70mm	72mm	72mm
Hauteur de l'écartement (Hag)		10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
Hauteur de la bobine (Hvc)		29 mm	29 mm	44mm	44mm	44mm	44mm
Surface du diaphragme (Sd)		201 cm^2	201 cm^2	332 cm^2	332 cm^2	480 cm^2	480 cm^2
Diamètre de la bobine		40 mm (1.6 po)	40 mm (1.6 po)	65 mm (2.6 po)	65 mm (2.6 po)	65 mm (2.6 po)	65 mm (2.6 po)
Poids de l'aimant		52 oz	52 oz	128 oz	128 oz	144 oz	144 oz

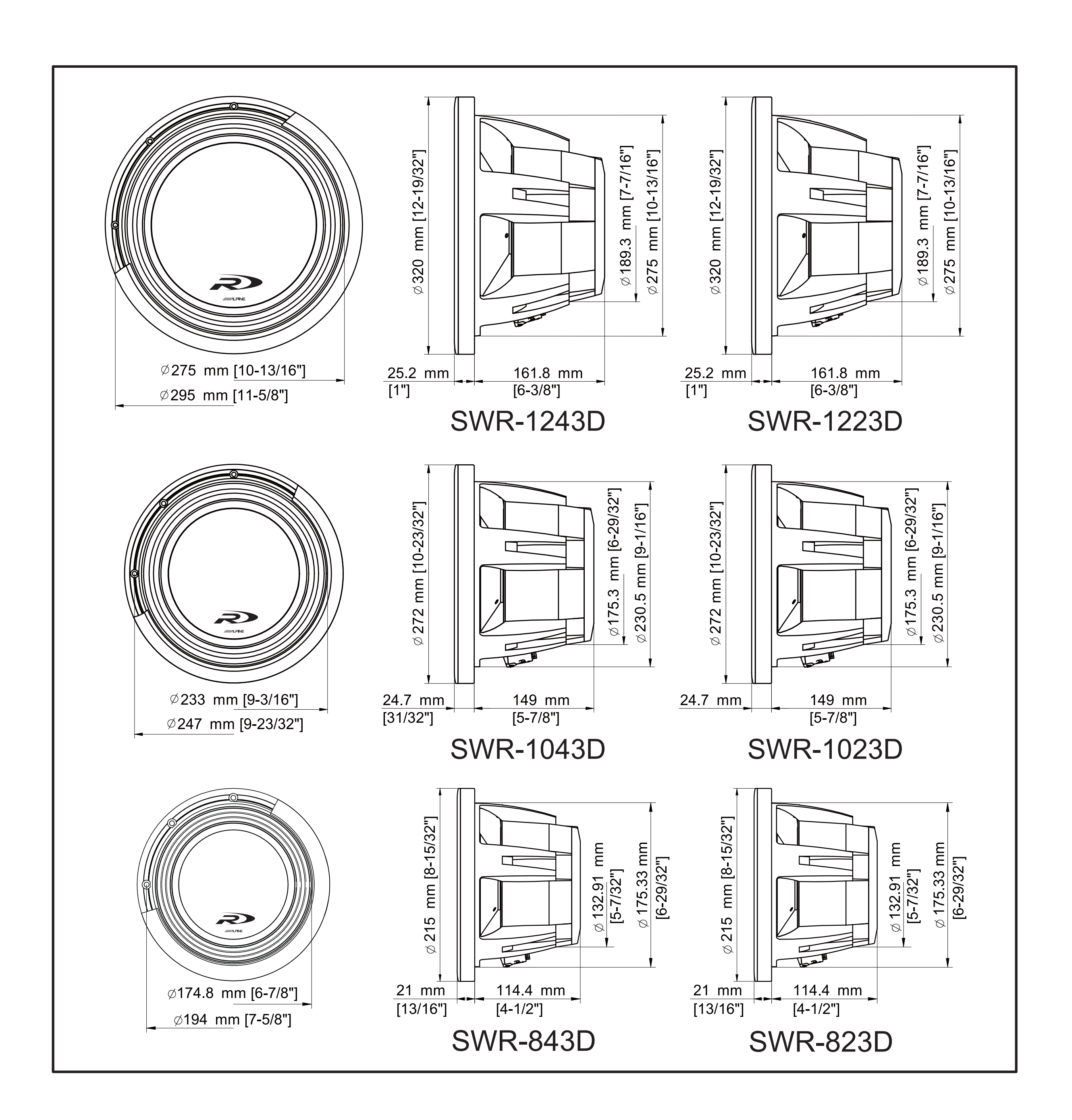
Notes:

Remarque : Les spécifications peuvent changer sans préavis.

Paramètres T/S mesurés/calculés avec bobines reliées en série, après rodage.

* Ne pas utiliser cette spécification souvent mal comprise comme référence pour la puissance du haut-parleur d'extrêmes graves.

** Panneau de 0.75 po (19 mm) d'épaisseur, ouverture correspondant environ au diamètre intérieur du joint d'étanchéité.



ALPINE®

ALPINE ELECTRONICS,INC.
1-7 Yukigaya-otsukamachi,
Ota-ku, Tokyo 145-0067, Japan
Tel: (03) 5499-4515

ALPINE ELECTRONICS OF AMERICA, INC.
19145 Gramercy Place, Torrance,
California 90501, U.S.A.
Tel: 1-800-ALPINE-1 (1-800-257-4631)

ALPINE ELECTRONICS OF CANADA, INC.
777 Supertest Road, Toronto,
Ontario M3J 2M9, Canada
Tel: (416) 736-6211

ALPINE ELECTRONICS OF AUSTRALIA PTY. LTD.
161-165 Princes Highway, Hallam
Victoria 3803, Australia
Tel: (03) 8787-1200

ALPINE ELECTRONICS DE ESPAÑA, S.A.
Portal de Gamarra 36, Pabellón 32
01013 Vitoria (Álava). APDO. 133, Spain
Tel: (945) 283-588

ALPINE ELECTRONICS GmbH
Wilhelm-Wagenfele-Straße 1-3
80807 München, Germany
Tel: (089) 324-2640

ALPINE ELECTRONICS (Benelux) GmbH
Leuvensesteenweg 510-B6
1930 Zaventem, Belgium
Tel: 02-7251315

ALPINE ELECTRONICS OF U.K., LTD.
Alpine House Earlplace Business Park,
Fletchamstead Highway, Coventry CV4, 9TW
United Kingdom
Tel: (2476) 719-500

ALPINE ELECTRONICS FRANCE S.A.R.L.
98,Rue de la Belle Etoile, Z.I. Paris Nord,
B.P. 50016, 95945, Roissy Charles de Gaulle
Cédex, France
Tel: (01) 4863-8989

ALPINE ITALIA S.p.A.
Viale C. Colombo 8,
20090 Trezzano Sul Naviglio (MI), Italy
Tel: (02) 484-781

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